ISSUE SLIP STAPLE AREA (for additional cross references)

| POSITION                  | INITIALS | ID NO.  | DATE     |
|---------------------------|----------|---------|----------|
| FEE DETERMINATION         | -        |         |          |
| O.I.P.E. CLASSIFIER       | ~        | 04000   | 1/12/17  |
| FORMALITY REVIEW          | KK       | 1/10029 | 7/00/00  |
| RESPONSE FORMALITY REVIEW |          | 70029   | 3 129102 |
|                           |          |         |          |

## INDEX OF CLAIMS

| J | Rejected                   | N | Non-elected  |
|---|----------------------------|---|--------------|
| = | Allowed                    | 1 | Interference |
|   | (Through numeral) Canceled | Α | Appeal       |
|   | Restricted                 | 0 | Objected     |

| Cla      | im       |               |                |           |           | Dat          | le        |              |          |           |          | [ |
|----------|----------|---------------|----------------|-----------|-----------|--------------|-----------|--------------|----------|-----------|----------|---|
| Final    | Driginal | 107           |                |           |           |              |           |              |          |           |          |   |
|          | Ū        | )             |                |           |           |              | Γ         | 1            |          |           |          |   |
|          | 2        |               | ,              |           | _         | Г            | Г         |              |          |           |          |   |
|          | 3        | 1             | _              |           |           |              |           | Т            |          |           |          | ſ |
| _        | 4        | ~             | _              | 1         |           | $\vdash$     |           | $\vdash$     | П        |           |          | Ī |
|          | 5        |               |                | Г         |           |              |           | T            |          | П         |          | [ |
|          | 6        |               |                |           |           |              |           | Τ            |          | П         |          | [ |
|          | 7        | Г             | Г              |           |           |              |           | $\Box$       |          |           |          |   |
|          | 8        |               |                |           |           |              |           | L            |          | Ш         | $\sqcup$ | J |
|          | 9        |               | _              | L         |           | _            |           |              |          |           | ᅵ        | J |
|          | 10       |               |                | L         |           | L            | L         | <u> </u>     |          | Ш         | ᅬ        | ļ |
|          | 11       | _             |                |           |           |              | L         | <u> </u>     | ļ        |           | _        | j |
|          | 12       | L             | <u>_</u>       | L         |           | <u> </u>     | Ļ         | <del> </del> | <u> </u> | Ш         | _        |   |
|          | 13       |               | L              | ┖         | _         | _            | Ļ         | ↓            | <u> </u> | $\sqcup$  | $\dashv$ |   |
|          | 14       | 1             | <u> </u>       | ļ_        | L         | <u> </u>     | ┞         | ļ            | ╀        | $\sqcup$  |          |   |
| _        | 15       | 1             | ļ              | ├         | _         | ┡            | ┞         | 1            | 1        | $\square$ | _        |   |
| -        | 16       | -             | ⊢              | ├         | -         | ┡            | ├-        | ╁            | ⊬        | $\vdash$  | $\dashv$ |   |
|          | 17<br>18 | ⊢             | ├              | ┢         | -         | Ͱ            | ⊢         | ┼            | ╁        | $\vdash$  |          |   |
| -        | +        | -             | ┢              | ⊢         | ⊢         | ├            | ╁         | +            | ╁        | -         | $\dashv$ |   |
| <u> </u> | 19       | +             | -              | ⊢         | ├         | ├            | +         | +-           | +-       | Н         | ᅥ        |   |
| _        | 20       | 1             | <del> </del> — | ļ.        | <u> </u>  | ├            | ╀         | -            | ┼-       | $\vdash$  | $\dashv$ |   |
| _        | 21       | ┼             | ╀              | ┼         | $\vdash$  | ┝            | +         | +-           | +-       | Н         | $\dashv$ |   |
| H        | 22       |               | +-             | ┼         | ┝         | ╁            | ╁         | ╂            | ╁╌       | $\vdash$  | $\dashv$ |   |
| -        | 24       |               | ╁              | $\vdash$  | +         | ⊢            | ╁         | +            | ╁╴       | $\vdash$  | $\dashv$ |   |
| ⊢        | 25       | +             | ╁              | ┼         | ╁         | ╁            | ╁         | +            | ╁╌       | H         |          |   |
| -        | 26       | $\overline{}$ | ╁              | +         | ╁         | -            | ╁         | +            | +        | 1         | -        |   |
| -        | 27       | +             | $\vdash$       | 1         | t         | $^{\dagger}$ | $\dagger$ | +-           | +        | H         |          |   |
| -        | 28       | -             | t              | T         | ╁         | 1            | T         | 1-           | 1-       | $\vdash$  |          |   |
|          | 29       |               | T              | T         | 1         |              | T         | $\top$       | ✝        |           |          |   |
| Г        | 30       |               | 1              | $\top$    |           | T            | Т         | 1            | Т        |           |          |   |
| Г        | 31       | ī             | T              | 1         | T         | 1            | T         | 7            |          |           |          |   |
| Г        | 32       | 2             |                |           |           |              |           |              |          |           |          |   |
|          | 33       | 3             |                |           |           |              | L         | $\perp$      | $\perp$  | _         |          |   |
|          | 34       |               | $\perp$        | 1         | L         | 1            | 1         | $\perp$      | 4        | ╄         | _        |   |
| _        | 35       |               | $\perp$        | $\bot$    | Ļ         | 1            | _         | 4            | 1        | ╀         | Ļ        |   |
| L        | 36       |               | -              | 1         | $\perp$   | 4            | +         | -            | -        | -         | _        |   |
| L        | 38       |               | +              | +         | ╀         | ╁            | +         | +            | ╁        | ┼         | ├        |   |
| -        |          |               | ╀              | +         | +         | ╁            | +         | - -          | +        | ╁╌        | $\vdash$ | l |
| -        | 39       | -             | +              | +-        | +         | ╁            | ╁         | +            | +        | ╁         | ╁╴       |   |
| -        | _        | 1             | ╀              | +         | +         | +-           | +         | +            | ┿        | +         | -        | - |
| -        | 4        | _             | +              | +         | +         | +            | +         | +            | +        | +-        | -        | ł |
| $\vdash$ | 42       |               | +              | ╁         | +-        | +            | +         | +            | +        | +         | ┝        | 1 |
| -        | 4.       |               | +              | +         | +         | +            | +         | +            | +        | +-        | -        | 1 |
| $\vdash$ | 4:       | _             | +              | +         | +         | +            | +         | +            | +        | +         | $\vdash$ | 1 |
| $\vdash$ | 4        |               | +              | +         | +         | $^{\dagger}$ | +         | +            | +        | +-        | $\vdash$ | 1 |
| -        | 4        |               | +              | 十         | +         | +            | $\dagger$ | +            | +        | +         | 1        | 1 |
| -        | 4        | _             | +              | +         | $\dagger$ | +            | +         | +            | +        | $\top$    | $\vdash$ | 1 |
| -        | 4        | -             | +              | $\dagger$ | T         | 1            | - -       | +            | 1        | +-        | 1        | 1 |
| $\vdash$ | +-       | -             |                | -         | +         |              | -1-       |              |          |           | 1        | 1 |

| _        |          |          |          | _        |              |           |           |         |               |                |               |           |
|----------|----------|----------|----------|----------|--------------|-----------|-----------|---------|---------------|----------------|---------------|-----------|
| Cla      | im       |          |          |          |              | Da        | ate       |         |               |                |               |           |
|          | Original |          |          |          |              |           |           |         |               |                |               |           |
| Final    | ō        |          | -        |          |              |           |           |         |               |                |               |           |
| $\Box$   | 51       |          | T        |          |              |           | I         | $\neg$  |               | $\Box$         |               |           |
|          | 52       |          |          |          |              | Γ         | L         |         |               |                |               |           |
| Г        | 53       | ,        |          |          |              |           |           | $\perp$ |               |                |               |           |
|          | 54       |          |          |          |              |           | I         | $\Box$  |               | $\Box$         |               |           |
|          | 55       |          | _        |          | L            | L         | $\perp$   | 4       |               | _              | _             |           |
| L        | 56       |          | _        |          | <u> </u>     | L         | ╀         | _       | _             | $\perp$        | _             |           |
| _        | 57       |          | _        | _        | L            | ╀         | 1         | 4       |               | $\Box$         | _             |           |
| _        | 58       |          |          |          | _            | ╀         | +         | -       | _             |                | _             | _         |
| ┡        | 59       | Ш        | $\dashv$ | _        | L            | ╀         | +         | 4       | _             |                | _             |           |
| <u> </u> | 60<br>61 | H        | $\dashv$ | _        | <u> </u>     | ╀         | +         | -       |               | -              | -             |           |
| -        | 62       | $\vdash$ | -        | _        | H            | ╀         | +         | -       |               | -              | _             | -         |
| -        | 63       |          |          | _        | $\vdash$     | +-        | +         | -       |               | -              | _             | -         |
| $\vdash$ | 64       | $\vdash$ |          | _        | ├            | ╁         | +         | ┥       |               | -              | _             | -         |
| $\vdash$ | 65       |          |          | -        | ┝            | ╁╴        | ╁         |         | -             | -              | _             | -         |
| $\vdash$ | 66       | Н        |          |          | ⊢            | +         | ╁         | -       |               | $\vdash$       |               | ├         |
| $\vdash$ | 67       | Н        | -        |          | H            | t         | ╁         | 7       | _             |                |               | -         |
| <b>-</b> | 68       |          |          | -        | t            | t         | 十         | -       | _             |                |               | Т         |
|          | 69       | H        |          |          | t            | t         | +         | ᅥ       |               |                |               | T         |
| $\vdash$ | 70       |          |          | _        | †            | t         | $\dagger$ | ┪       |               |                |               | -         |
| $\vdash$ | 71       |          |          | -        | ╁            | +-        | ╅         |         | _             | H              | _             | H         |
| -        | 72       | $\vdash$ | -        |          | ╁            | +         | ╁         |         |               |                | $\vdash$      | $\vdash$  |
| $\vdash$ | 73       | $\vdash$ |          | -        | T            | $\dagger$ | †         |         |               |                | Г             |           |
| -        | 74       | _        | 一        |          | ╁            | †         | +         | _       |               |                |               |           |
| $\vdash$ | 75       | 1        | $\vdash$ |          | T            | 1         | 1         |         |               |                |               | Γ         |
|          | 76       | 1        |          | Г        | T            | T         | T         |         |               |                |               |           |
|          | 77       |          |          |          |              |           |           |         |               |                |               |           |
|          | 78       |          |          |          |              |           |           |         |               | L              | L             |           |
|          | 79       |          |          |          |              |           |           |         | _             | L              | L             | L         |
|          | 80       | -        | _        | L        | 1            | 1         | _         |         | _             | _              | L.            | L         |
| $\perp$  | 81       | -        | _        | L        | $\perp$      | 1         | 4         |         |               | <u> </u>       | _             | 1         |
| $\vdash$ | 82       | -        | _        | Ļ        | $\perp$      | +         | 4         |         | _             | <u> </u>       | L             | ╀         |
| $\vdash$ | 83       |          | -        | -        | $\perp$      | +         | 4         |         | -             | <del> </del> — | ┝             | ╀         |
| -        | 84       |          | -        | 1        | +            | +         | 4         | _       | -             | $\vdash$       | -             | +         |
| $\vdash$ | 85       |          | ├-       | -        | +-           | +         | +         | _       | -             | ╁              | $\vdash$      | 十         |
| -        | 87       | ┵        | -        | $\vdash$ | +            | +         | +         | _       | $\vdash$      | +              | $\vdash$      | ╁         |
| -        | 88       | -        | $\vdash$ | +        | +            | +         | $\dashv$  |         | $\vdash$      | +-             | +             | +         |
| $\vdash$ | 89       | -        | $\vdash$ | +        | $\dagger$    | +         | -         |         | ┢             | ╁              | ┢             | $\dagger$ |
| -        | 90       | -        | 1        | t        | $^{\dagger}$ | $\dagger$ | 1         |         |               | $\vdash$       | $\dagger$     | $\dagger$ |
| $\vdash$ | 91       |          | +        | ╁        | +            | +         | 7         |         | -             | 十              | ✝             | +         |
| -        | 92       |          | +        | 1        | +            | +         | +         |         | $\vdash$      | $\vdash$       | +             | 十         |
| -        | 93       | -        | 1        | +        | +            | +         | +         |         | t             | T              | t             | +         |
| -        | 9        |          | $\vdash$ | 十        | $^{+}$       | 十         | ,         |         |               | T              | 1             | †         |
| -        | 95       | _        | $\vdash$ | +        | +            | +         | $\dashv$  |         | T             | †              | T             | $\dagger$ |
|          | 96       | -        | 1        | T        | $\top$       | Ť         | 7         | _       | T             | T              | 1             | T         |
|          | 97       |          | Τ        | 1        |              | Ť         |           |         | Т             | Т              | T             | T         |
|          | 98       |          | T        | T        |              | Ī         |           | _       | Ι             | Γ              | I             | Ι         |
| Г        | 99       | 9        |          | Τ        |              |           |           |         |               | Γ              | Γ             | I         |
| _        | 100      | _        |          |          | -7-          | $\tau$    | ╗         |         | $\overline{}$ |                | $\overline{}$ | т         |

| Cla      | im       | Date         |  |           |           |                |                |          |          |           |          |
|----------|----------|--------------|--|-----------|-----------|----------------|----------------|----------|----------|-----------|----------|
| Final    | Original | •            |  |           |           |                |                |          |          |           |          |
| ᄩ        |          |              |  | -         | -         | ⊢              | H              |          |          | Н         | $\vdash$ |
| Ш        | 101      | _            |  | ⊢         | ├-        | ├-             |                |          |          |           | Н        |
|          | 102      |              |  | L         | L         | <u> </u>       | <u> </u>       |          |          |           | Н        |
|          | 103      |              | L                                      | _         |           | ┡              |                |          |          | _         |          |
| <u> </u> | 104      |              | _                                      | _         | L         | ļ_             | _              |          |          | $\vdash$  |          |
| <u> </u> | 105      | -            | <u> </u>                               | <u> </u>  |           | ⊢              | H              |          |          | ┡         | Щ        |
| ┖        | 106      | <u> </u>     | ┡                                      | <u> </u>  |           | ┡              | ⊢              | -        | _        | -         | L        |
| $\vdash$ | 107      | <u> </u> _   | L                                      | <u> </u>  | ļ         | -              | ـــ            |          | -        | _         | $\vdash$ |
| L        | 108      | -            | _                                      | <u> </u>  |           | 1              | <u> </u>       | -        | _        | _         |          |
| ┡        | 109      |              | L                                      | <u>L.</u> | ļ         | ╄              | <u> </u>       |          | <u> </u> | ⊢         | _        |
| $\vdash$ | 110      |              | ╙                                      | <u> </u>  | _         | <u> </u>       | <u> </u>       | _        | _        | ┡         | _        |
| _        | 111      |              | _                                      | Ļ         | ┞-        | ╄              | <u> </u>       | _        | <u> </u> | <u> </u>  | _        |
|          | 112      |              | L                                      | <u> </u>  | ļ         | $\perp$        | <u> </u>       | L        | <u> </u> | <u> </u>  |          |
|          | 113      |              | <u> </u>                               | ļ.,       | L_        | 1              | ļ              | <u> </u> | <u> </u> | ┞-        | <u> </u> |
| $\vdash$ | 114      |              | $oldsymbol{oldsymbol{oldsymbol{eta}}}$ | L         | ┞         | ╄-             | <del> </del>   | 1        | _        | ļ         | ┞        |
| $\vdash$ | 115      | -            | <u> </u>                               | $\vdash$  | $\vdash$  | 1_             |                | <u> </u> | -        | _         | $\vdash$ |
| L        | 116      | —            | ↓_                                     | $\vdash$  | $\vdash$  | <del> </del> - | <del> </del> _ | _        | <u> </u> | $\vdash$  | 1        |
| _        | 117      | ┺            | <u> </u>                               |           | <u> </u>  | 1_             | ــــ           | _        | <u> </u> | ┡         | 1        |
| Ŀ        | 118      |              | _                                      | L         | _         | 1_             | Ļ              | _        | L.       | ┡         | ļ_       |
| L        | 119      |              | L                                      | L         | L         |                | _              | L        | 乚        | <u> </u>  | <u> </u> |
|          | 120      |              |  |           |           |                |                | 1        |          |           |          |
|          | 12       | i            | Г                                      | Τ         | Т         | Τ              | Т              |          | Г        | T         | T        |
| Г        | 122      |              | Т                                      | 1         | Τ         |                | Т              |          |          | П         | Τ        |
|          | 123      | 3            |  | Г         | Τ         | T              | T              | Π        | Г        | Τ         |          |
|          | 124      | -            | T                                      | $\top$    | 1         | T              | T              | T        | 1        | Τ         | 1        |
|          | 125      | <del> </del> |  | Τ         | $\top$    |                |                | Т        | Τ        | T         | Ţ        |
|          | 126      | ;            |  | $\top$    |           | 1              | T              | Т        | Τ        | T         | Т        |
|          | 127      | +            |  |           | T         |                |                | Г        | Т        | T         | T        |
| Г        | 128      | 3            |  | 1         |           | $\top$         |                | T        | Τ        | 1         | Τ        |
|          | 125      | 1            | T                                      | T         | Τ         | $\top$         | T              | Τ        | Т        | Т         | Τ        |
|          | 130      |              | T                                      | 1         | T         |                | T              | Т        | Т        |           | T        |
| $\vdash$ | 13       | 1            | Τ                                      | 1         | Τ         |                |                | T        | Π        | T         | T        |
| $\vdash$ | 13       | +            | 1-                                     | 1         | T         | T              | 1              | $\top$   | T        | T         |          |
|          | 13       | 3            | 1-                                     | 1         | 1         | $\top$         | Τ              |          | 1        | ┰         | T        |
|          | 13       |              | $\top$                                 | Τ.        | 1         | 1              | $\top$         | T        |          |           | T        |
| $\vdash$ | 13       | 5            | $\top$                                 | T         | Τ         | 7              | $\top$         | T        | 1        |           | Т        |
|          | 13       | 6            | 1                                      | T         | Τ         | 1              | T              | 1        | T        |           | T        |
|          | 13       | 7            | T                                      | 1         | T         |                | 1              | $\top$   |          | T         | I        |
|          | 13       | -            | T                                      | 1         | Τ         | $\top$         | 1              | Τ        | T        | T         | T        |
| Г        | 13       |              | T                                      | T         | $\top$    | 7              | 1              | Τ        | Τ        | T         | I        |
| Г        | 14       | _            | 1                                      | T         | T         | Т              | $\top$         | Τ        | Τ        | T         | T        |
|          | 14       |              | 1                                      | +         | +         | $\top$         | 1              | $\top$   | $\top$   | T         | 十        |
| $\vdash$ | 14       | 2            | +                                      | $\dagger$ | +         | +-             | +              | +-       | +        | +         | +        |
|          | 14       |              | +                                      | +         | $\dagger$ | +              | +              | +        | +        | $\dagger$ | +        |
| $\vdash$ | 14       |              | +                                      | +         | +         | +              | +              | +        | ╁        | +         | +        |
| $\vdash$ | 14       |              | +                                      | ╁         | +         | +              | +              | +        | +        | +         | +        |
| $\vdash$ | 14       |              | ╁                                      | +         | +         | +              | +-             | +        | +        | 十         | 十        |
| -        | 14       |              | ╁                                      | +         | +         | +              | +-             | +        | t        | +         | +        |
| -        | 14       |              | +                                      | +         | +         | +              | +              | +        | +        | +         | +        |
| -        | 14       |              | +                                      | +         | +         | +              | +              | +        | +        | +         | 十        |
| $\vdash$ | 15       |              | +                                      | +-        | +         | ┰              | +              | +-       | +-       | +         | +        |
| _        | 113      | ٩            |  |           |           |                | _              |          |          |           |          |